## CLAIMS:

1. A bioerodable construct for controlled release of bioactive materials, said construct comprising a blend of two or more poly(ester-amide) polymers (PEA) prepared by polymerizing a diol (D), a dicarboxylic acid (C) and an alpha-amino acid (A) through ester and amide links in the form (DACA)<sub>n</sub>.

wherein the PEA polymer has the formula;

$$\left[ -O - (CH_2)_k - O - C - CH - N + C - (CH_2)_m - C - N - CH - C - N - C - N - CH - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C - N - C$$

where k = 2-12, especially 2, 3, 4, or 6, m = 2-12, especially 4 or 8, and  $R = CH(CH_3)_2$ ,  $CH_2CH(CH_3)_2$ ,  $CH(CH_3)CH_2CH_3$ ,  $CH_2C_6H_5$ , or  $CH_2C_6H_5$ .

- 2. The construct of claim 1, wherein k = 2, 3, 4, or 6 and m = 4 or 8.
- 3. The construct of claim 1, wherein the blend comprises a first PEA polymer in which A is L-phenylalanine (Phe-PEA) and a second PEA polymer in which A is L-leucine (Leu-PEA).
- 4. The construct of claim 3, wherein the ratio of Phe-PEA to Leu-PEA is from 10:1 to 1:1.
- 5. The construct of claim 3, wherein the ratio of Phe-PEA to Leu-PEA is from 5:1 to 2.5:1.
- 6. The construct according to any preceding claim, wherein the construct is a deformable sheet adapted to conform to a biological surface.
- 7. The construct according to any preceding claim, further comprising a bioactive agent.

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- 8. The construct of claim 7, wherein the bioactive agent is selected from the group consisting of antiseptics, anti-infectives, such as bacteriophages, antibiotics, antibacterials, antiprotozoal agents, and antiviral agents, analgesics, anti-inflammatory agents including steroids and non-steroidal anti-inflammatory agents including COX-2 inhibitors, anti-neoplastic agents, contraceptives, CNS active drugs, hormones, and vaccines.
- 9. The construct according to any preceding claim, wherein the construct comprises an enzyme capable of hydrolytically cleaving the PEA polymer.
- 10. The construct according to claim 9, wherein the enzyme is  $\alpha$ -chymotrypsin.
- 11. The construct according to claim 9, wherein the enzyme is adsorbed on the surface of the construct.
- 12. The construct according to claim 9, wherein the construct contains bacteriophage which are released by action of the enzyme.
- 13. A method of treating a patient having an ulcerative wound comprising inserting into the wound or covering the wound with a bioerodable construct according to claim 1, wherein the bioerodable construct is a deformable sheet containing a bioactive agent.
- 14. The method of claim 13, wherein the bioactive agent is bacteriophage, an antibiotic, an antiseptic, or an analgesic.
  - 15. The method of claim 13, wherein the wound is open or infected.
- 16. The method according to claim 14, wherein the bacteriophage are specific for bacteria found in the wound.
- 17. The method according to any preceding claim, wherein the construct also comprises an enzyme capable of hydrolytically cleaving the PEA polymer.

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